

# PATENT ABSTRACTS OF JAPAN

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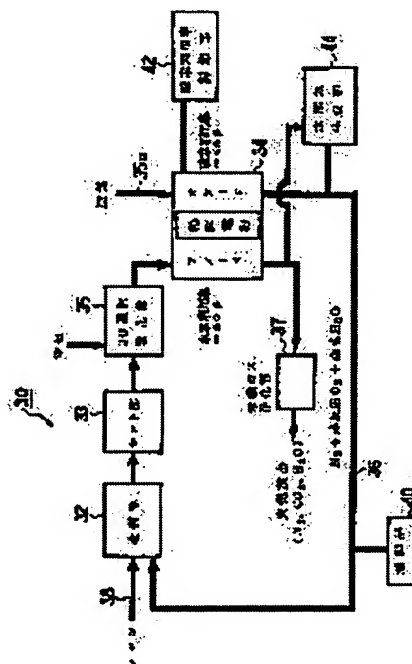
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## (54) FUEL CELL SYSTEM

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To miniaturize a fuel cell system provided with a means for producing a fuel gas by reforming a material.

**SOLUTION:** This fuel cell system 30 has a reforming part 32 for reforming a hydrocarbon material to produce a fuel gas, and a fuel cell 34 that is fed with the fuel gas and oxygen as a fuel and generates power; and the fuel cell 34 is directly connected to the reforming part 32 through a connection pipe 36. When the fuel cell 34 is operated, power is generated and steam is produced as a by-product. The steam is sent into the reforming part 32 through the connection pipe 36, and the steam reforming of the material is performed in the reforming part 32 by utilizing the steam. Oxygen that has not reacted in the fuel cell 34 is also sent into the reforming part 32 through the connection pipe 36. The steam reforming and partial oxidation reforming of the material is performed in the reforming part 32 by utilizing the steam and the oxygen, so that the fuel gas is produced. Thus, the need of installing an evaporator and a guide pipe for feeding oxygen can be obviated by utilizing, in the reforming part 32, the steam generated from the fuel cell 34 or the oxygen remaining unreactionary.



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